at1110paper_practice_test (v116)

1. Factor the expression.

$$x^2 + x - 20$$

$$(x + 5)(x - 4)$$

2. Factor the expression.

$$16x^2 - 25$$

$$(4x + 5)(4x - 5)$$

3. Solve the equation.

$$(2x - 5)(7x + 8) = 0$$

$$x = \frac{5}{2} \qquad x = \frac{-8}{7}$$

4. Solve the equation with factoring by grouping.

$$12x^2 - 10x - 18x + 15 = 0$$

$$(2x - 3)(6x - 5) = 0$$
$$x = \frac{3}{2} \qquad x = \frac{5}{6}$$

5. Expand the following expression into standard form.

$$(7x + 8)^2$$

$$49x^2 + 56x + 56x + 64$$
$$49x^2 + 112x + 64$$

6. Expand the following expression into standard form.

$$(8x + 9)(6x + 5)$$

$$48x^2 + 40x + 54x + 45$$
$$48x^2 + 94x + 45$$

7. Solve the equation.

$$8x^2 - 37x + 24 \ = \ 3x^2 + 2x - 4$$

$$5x^2 - 39x + 28 = 0$$
$$(5x - 4)(x - 7) = 0$$
$$x = \frac{4}{5} \qquad x = 7$$

8. Expand the following expression into standard form.

$$(2x - 5)(2x + 5)$$

$$4x^2 + 10x - 10x - 25$$
$$4x^2 - 25$$